FIELD-READY



TranzStor

— 5XL —

USER MANUAL

Z Microsystems

WARNING

TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE. ALSO, DO NOT USE THIS UNIT'S POLARIZED AS PLUG WITH AN EXTENSION CORD RECEPTACLE OR OTHER OUTLETS UNLESS ALL THREE PRONGS CAN BE FULLY INSERTED

1. Use the power cable supplied with the product to help prevent interference with radio and television reception. The use of cables and adapters may cause interference with electronic equipment in the vicinity of this unit.



TranzStor

5XL

2. Changes or modifications not expressly approved by Z Microsystems could void user's warranty.

CAUTION

RISK OF ELECTRIC SHOCK - DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK OF UNIT). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.

This symbol warns the user that insulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any part inside this unit.

This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore it should be read carefully in order to avoid any problems.

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SECTION	PAGE

ABOUT MANUAL

This Manual is also available on the Z Microsystems website (www.zmicro.com). We recommend you read this manual carefully and follow the instructions in the Installation chapter for verification of system functions and control settings.

SAFETY PRECAUTIONS

DANGER:

To avoid shock hazard:

- *Do not penetrate the 5XL with any screw longer than .18". Damage will occur.*
- *Do not connect or disconnect the 5XL during an electrical storm.*
- *The power cord plug must be connected to a properly wired and grounded power outlet.*
- *Any equipment to which the 5XL will be attached must also be connected to properly wired and grounded power outlets.*

PRODUCT DESCRIPTION



Z Microsystems' TranzStor 5XL, based on the hot-swappable TP7 drive module, spans the gap between the single drive TranzStor 1Xi and the eight drive TranzStor 8X RAID.

The TranzStor 5XL is a rugged five drive RAID system in a 2U tall, 19" rack-mountable enclosure. A tough removable door provides dust and EMI protection and allows easy access to the dust filter for cleaning. The 5XL supports five TP7 SCSI drives with latest maximum capacities available.

Along with the TP7 drives, the RAID controller is also removable from the front for ease of repair, upgrades and security control. The controller supports RAID level formats: 0, 1, 0+1, 3, 5, 10, 30, 50, NRAID, and JBOD. The TranzStor 5XL supports two data channels and can be configured with a split data bus.

The field-ready 5XL was designed with modification flexibility to meet a broad range of customer requirements.

The TranzStor 5XL is a compact, rugged storage system ideal for pairing with a rugged Z Microsystems server for a deployed database application in a single transit case.

SHIPMENT CONTENTS

Ensure all of the following parts are included in the package received from Z Microsystems. Verify all parts have not been damaged during shipment. If any of the parts are missing or damaged, immediately contact Z Microsystems Customer Service at 858-657-1000.

- 5XL
- Hardware kit
- User Manual
- Power Cable
- Ethernet Cable
- Host Serial Cable (up to 2 depending on configuration)
- Terminators (up to 4 depending on configuration)
- Controller User Manual

Remember to save the unit's original shipping materials. It may be necessary to ship the unit at a later date.

NOTE: For the fastest and easiest installation of the 5XL, follow these steps in the sequence they are presented.

REQUIRED TOOLS

- Phillips Head Screwdriver

PREPARATIONS

In preparation to install the 5XL, take the following precautionary steps:

Turn off the electrical power to the host computer.

INSTALLATION PRECAUTIONS

When mounting the 5XL, there is a maximum of .18" screw penetration on the underside and side screw hole locations.

CABLE CONNECTIONS FOR TRANZSTOR 5XL

TranzStor 5XL RAID Rear Panel

The picture below shows the rear of a TranzStor 5XL RAID unit and the connection points for these cables.

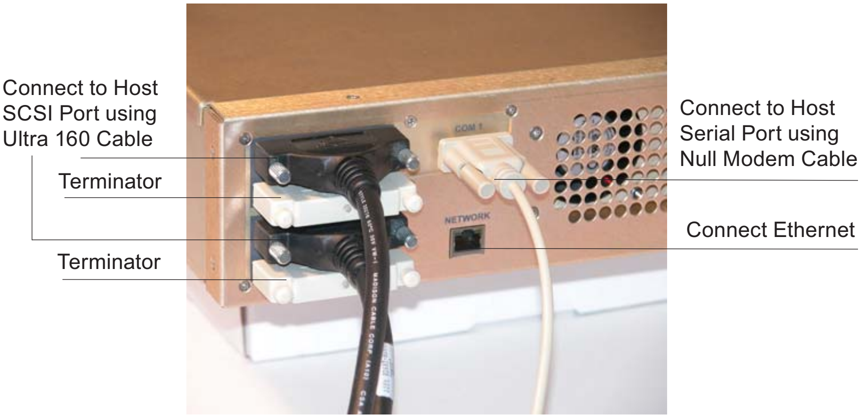


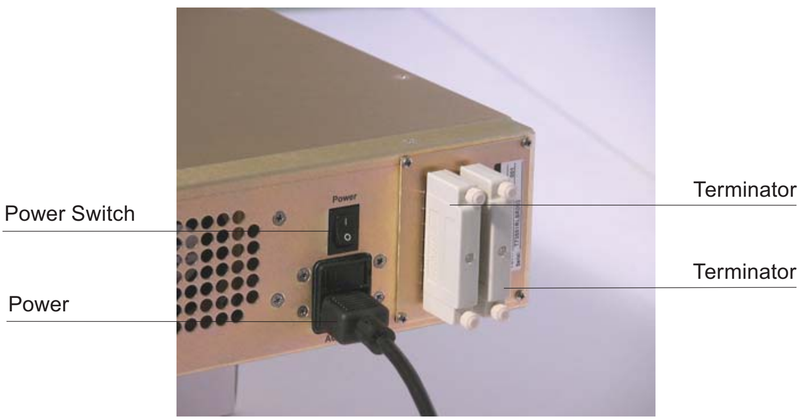




See the next page for an image of the 5XL fully connected.

CONNECTED TRANZSTOR 5XL







REMOVING THE DOOR



In this image, the door is installed on the 5XL.



To remove the door, turn the captive thumb screws on the face of the door counterclockwise until the door comes loose.



It will hinge downward and hang.



The door can be removed by lifting it out of the hinge.

TP7 DESCRIPTION

Red - SCSI Drive



Sliding Locking catch

Locking handle

High tensile extruded aluminium alloy thermo-conductive body

High tensile diecast aluminium alloy rear panel





High tensile diecast aluminium alloy front panel

Rear Connector

INSERTING THE TP7



Ensure the door is fully lowered or removed before attempting to insert the drives. The drives will not slide in if the door is in the partially raised position.



With the handle in the open position, hold the TranzPak 7 by the main body and insert it partially into the docking bay. (Be sure that it is sliding on the black guides).



Using your thumb push the TranzPak 7 gently into the bay...



until you can feel it touching off on the rear connector.



Check that the locking catch is aligned with the locking indent in the slide rail and press the handle towards body...



until it snaps the locking handle in place. Check that all TranzPak 7 disk modules are aligned across the face of the 5XL.

REMOVING THE TP7



Slide the locking catch to the right to allow locking handle to spring open.



Locking handle springs open.



Pull handle gently forward to eject the TranzPak 7 off of the rear connector.



Continue to gently pull handle to slide the TranzPak 7 forward. The TranzPak 7 should slide over the grounding contacts until it is half way out.



Take the TranzPak 7 by the main body and pull straight out.

POWER UP TRANZSTOR 5XL

Before powering the TranzStor 5XL, make sure all of the connections are tightened securely at the rear of the unit.

To power up the TranzStor 5XL RAID, turn on the power switch at the rear of the unit.

Power Switch, Rear



Then press the power switch on the front of the unit on the right side.



Power Switch, Front

STATUS INDICATORS

Each drive has two dedicated status indicator lights to the right of the drive. The following indicators apply to the drives only:

Green= When the drive is plugged into the TranzStor 5XL, the green light indicates the drive has power.

Yellow= The yellow light comes on when the drive is accessed by the RAID controller, indicating activity on the drive.

The 5XL system light, located to the left of the 5XL logo (on the lower right hand corner) illuminates Green to indicate power to the system. The system only has one indicator light.



Drive Status Indicators

System Power Indicator

For operation of the RAID Controller, refer to the Infortrend SR2500F User's Manual.

MAINTAINING THE 5XL

WARNING: Be sure to turn off the power before you perform any maintenance on the RAID.

CLEANING THE TRANZSTOR 5XL

Unplug the 5XL from the power outlet before cleaning.

•To clean the surface of the 5XL, lightly dampen a soft, clean cloth with water or mild detergent and wipe the surface of the 5XL gently.

REPLACING THE FILTER ON THE 5XL DOOR

1. Open the door of the 5XL and remove the screws circled in the image below:



2. Once the screws are removed, lift the interior plate to access the filter.

3. Remove the filter and replace with a new filter.

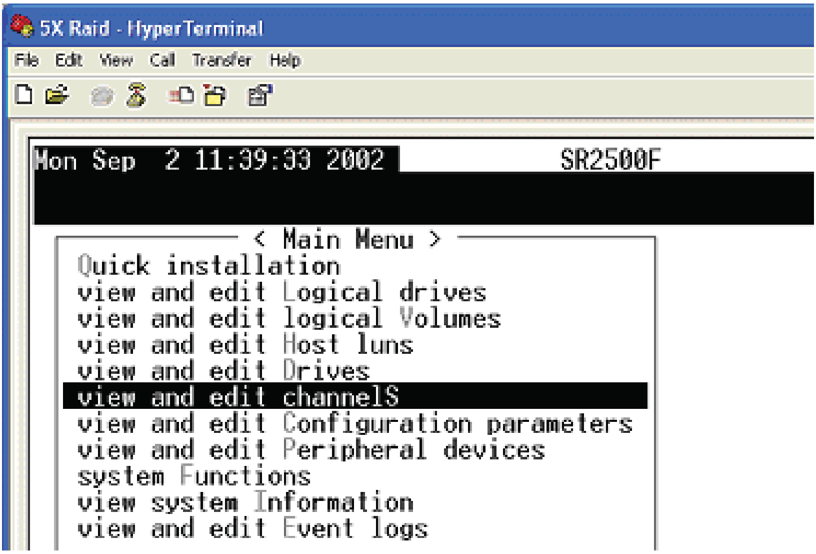
4. Replace the interior plate and secure the screws in place (see image above for location of screws).

TROUBLESHOOTING

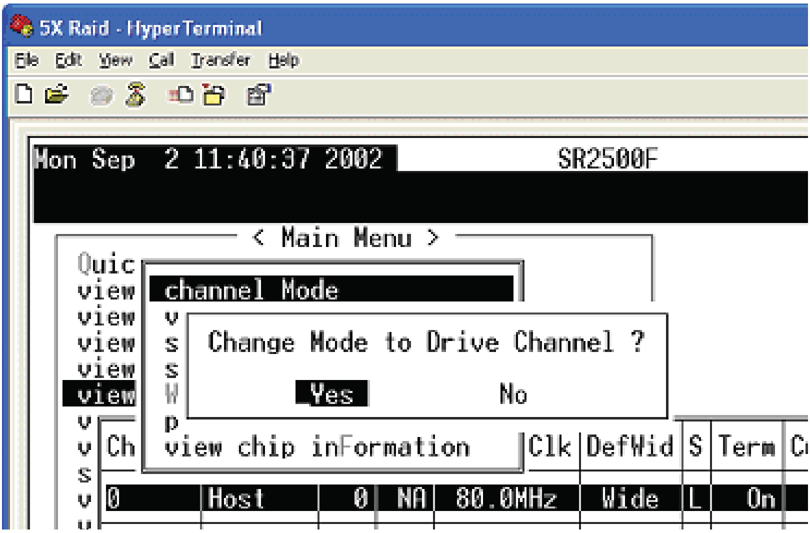
Configuring the Channels After Accidental Reset

If the controller is reset accidentally to factory default settings, follow these steps to recover.

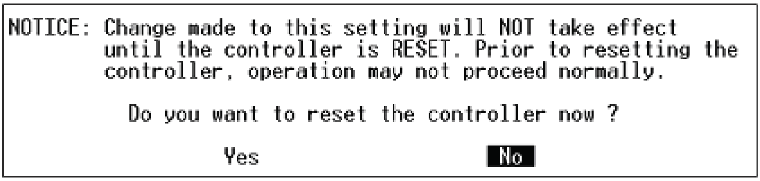
1. Select “view and edit channels”.



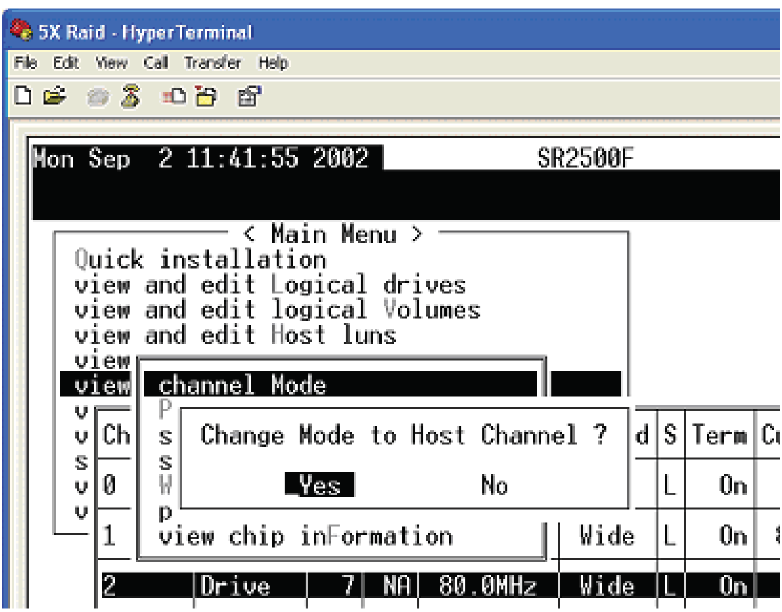
2. Now select “Chl 0” and then “channel Mode”, and then select “Yes”.



3. At this point you will be asked if you want to reset the controller. Select “No”.



4. Now select “Chl 2” and then “channel Mode”, and then “Yes”.



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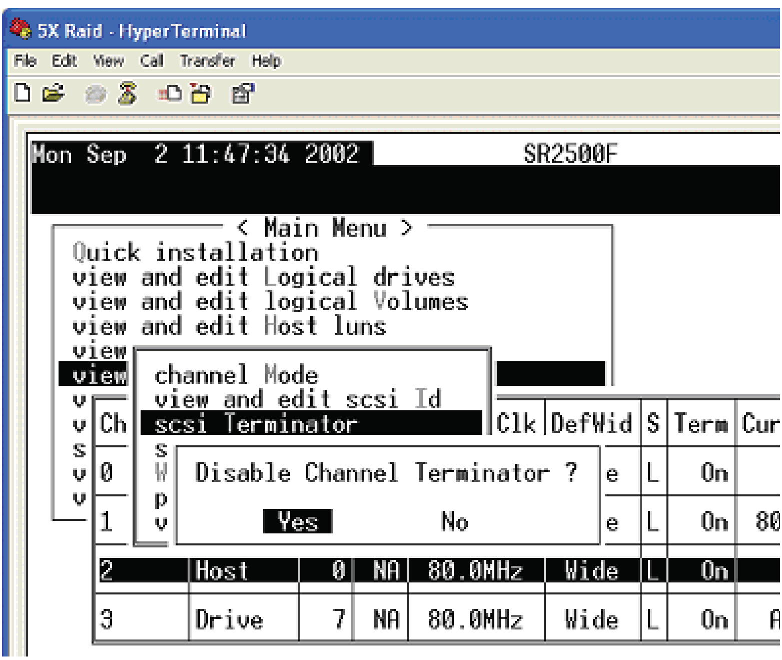
5. When asked to reset the controller select “No”.

```
NOTICE: Change made to this setting will NOT take effect
        until the controller is RESET. Prior to resetting the
        controller, operation may not proceed normally.

          Do you want to reset the controller now ?

                  Yes                       No
```

6. Now select “Chl 2” and then “scsi Terminator”, and then “Yes”.



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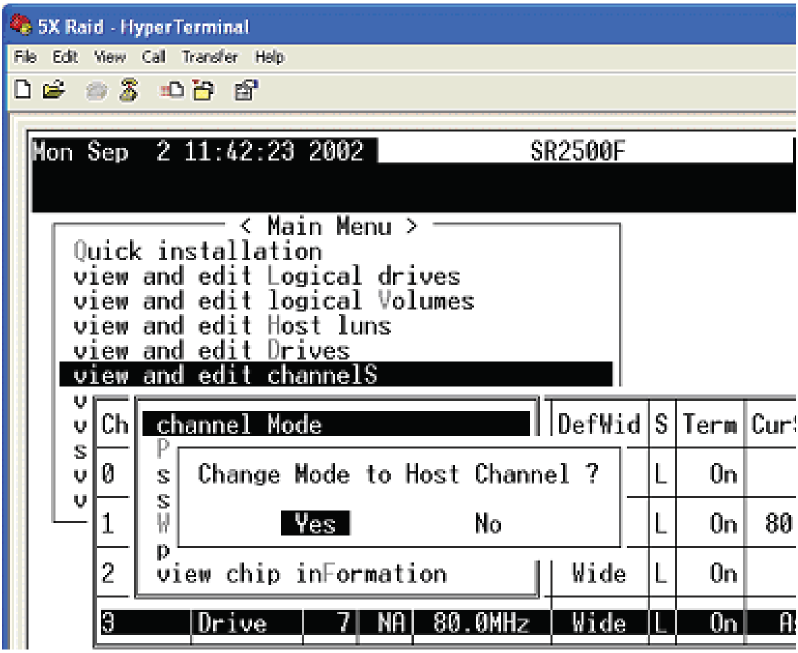
7. When asked to reset the controller select “No”.

```
NOTICE: Change made to this setting will NOT take effect
        until the controller is RESET. Prior to resetting the
        controller, operation may not proceed normally.

          Do you want to reset the controller now ?

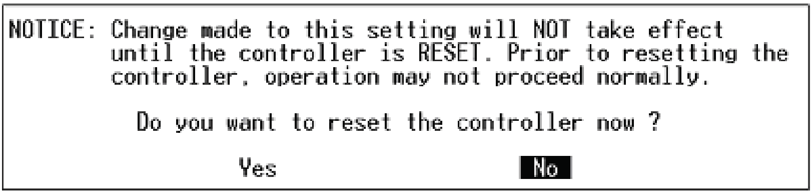
                 Yes                      No
```

8. Now select “Chl 3” and then “channel Mode”, and finally “Yes”.

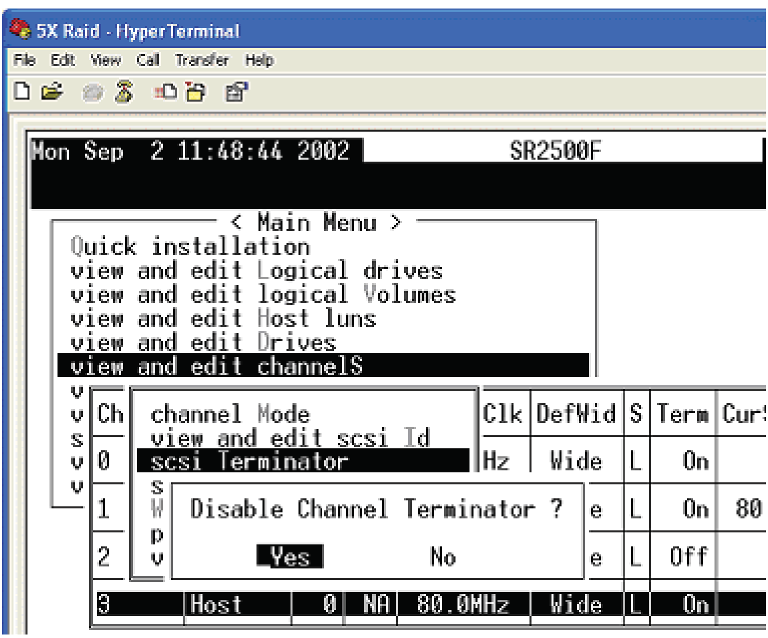


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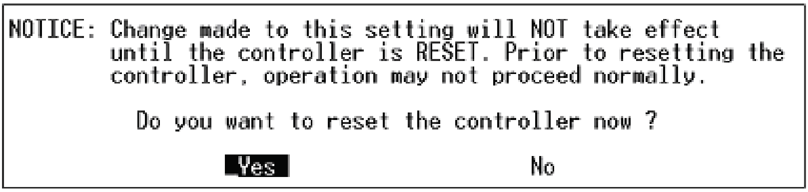
9. When asked to reset the controller select “No”.



10. Now select “Chl 3” and then “scsi Terminator” and then “Yes”.



11. This time, when asked if you want to reset the controller, select “Yes”.



Drive Failures

Ensure the drives are seated securely in the 5XL. Remove the failed drive and re-install it to ensure a good connection.

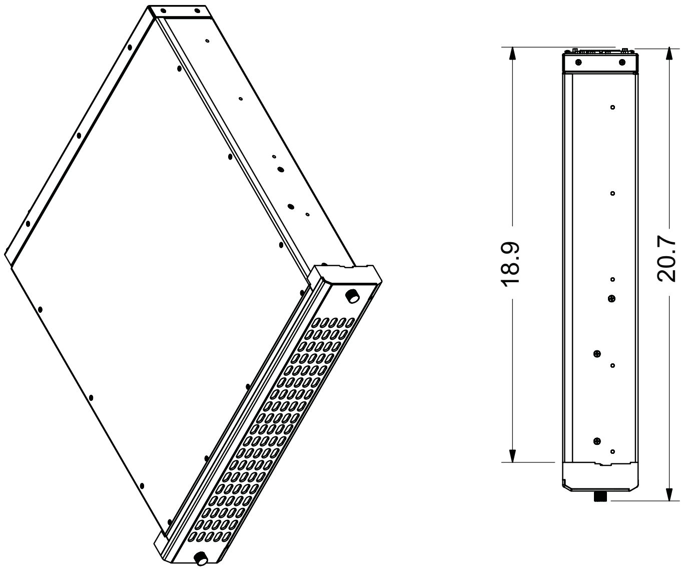
Ensure that the power indicators on the front of the 5XL are green for the drive(s) that is failing.

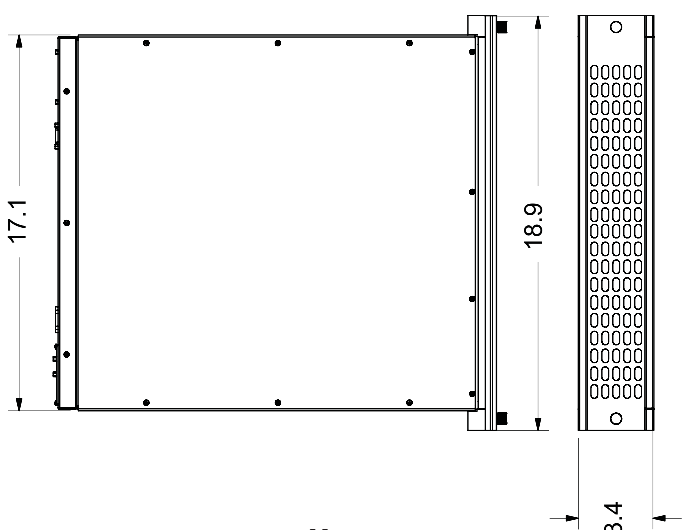
If the indicator shows a green light, ensure the drive terminations are secure at the rear of the 5XL.

If the drive is still failing, call the Customer Service Department of Z Microsystems for further assistance.

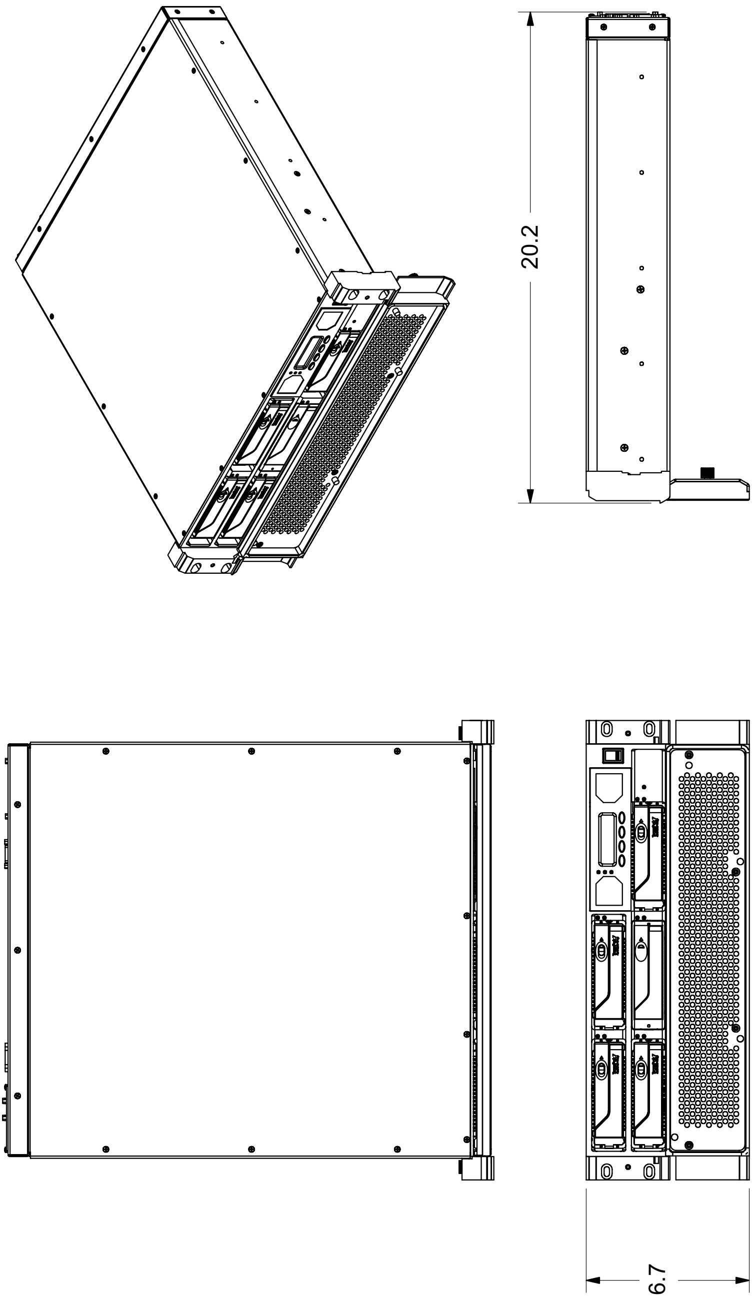
MECHANICAL OUTLINE FOR 5XL, DOOR CLOSED

WARNING: There is a maximum of .18" screw penetration on the underside and side screw hole locations. Ensure screw penetration does not exceed .18".





MECHANICAL OUTLINE FOR 5XL, DOOR OPEN



SPECIFICATIONS

General Display Specifications	
Enclosure	
Materials	Aluminium 5052 H32, 6061 T6, A380
System Capabilities	Five storage bays
Storage Capacity	Up to 582.4 GB
Base Options	Split-SCSI Bus
Dimension	3.4” H, 18.9” W, 20.7” D (in rack)
Net Weight	35 lbs. (with five TP7 drives @ 2.5 lbs. each)
Power Requirements	90-264 VA, 1.90A, 47-63 Hz, 400 Hz
Environmental*	
Operating Temp	+5º to + 50º C
Non Operating Temp	-40º to + 65º C
Operating Humidity	5% to 95% Non condensing
Non Op. Humidity	5% to 95% Non condensing
Non Op. Altitude	-1,300 to 40,000 ft.
Operating Altitude	-1,300 to 10,000 ft.
Vibration	MIL-STD-167, 1.27 g’s sinc 4-50 Hz
Shock	MIL-STD-810E, Method 516, 30g’s,
	MIL-S-901D (isolated rack)
Fungus	Non Nutrients / contaminants
Reliability	
MTTR	<20 minutes
MTBF	Chassis= 96,311 Hrs. @ 25º C
Regulatory	
Safety	UL 1950 (used as a guideline)
EMI	FCC Class A
Connectors	Micro Miniature 68 pin SCSI Bus Expansion, Terminator
Quality/Workmanship	IPC / ISO 9002 and applicable section of MIL-HDBK-454

* Units are designed and built to meet the following environmental specifications. Results of tests are pending.

REPLACING PARTS

If the Z Microsystems Technical Support Engineer determines that the product needs to be replaced, a Customer Service Representative will issue a Return Material Authorization (RMA) number.

An RMA number is required to return a product to Z Microsystems, regardless of the reason for the return.

The Z Microsystems Customer Service Department/RMA Request Form will ask the customer to provide the following information:

- model number of the defective product
- serial number of the defective product
- problem with the defective product
- return "ship to" address
- the name and address of the company department to which we will send the invoice (if product is out of warranty or is different from the "ship to" address.
- phone number and e-mail address of contact
- purchase order number

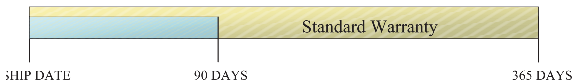
You will be given an RMA number and will be asked to send the product to:

Z Microsystems
ATTN.: (RMA#) It is very important to reference the RMA#
5945 Pacific Center Dr., Suite 505
San Diego, CA 92121

WARRANTIES

Standard Warranty

-no charge-



Z Microsystems' one-year Standard Warranty includes a 90-day AirSpare Service Plan. This means that if any standard Z Microsystems' product fails within the first 90 days after shipping, the customer will receive a new replacement.

All non-standard* products are covered for one year under Z Microsystems' Standard Warranty that includes free parts and labor. However, the 90-day AirSpare Plan can be purchased as an additional option for non-standard products.

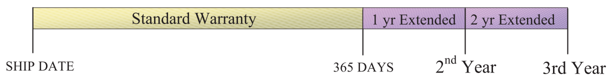
1-90 days - Z AirSpare Service

- 91-365 days - Free Parts and Labor
- 9-5 EST telephone technical assistance
- Online technical help
- Email product updates

*a non-standard product is a prototype or a product specifically designed or engineered per a customer's specification

To return a defective product a customer can call the Z Microsystems Customer Service Department at 1-858-657-1000, ext. 232, or fill out the RMA Request Form on our website. Please see the section in this manual titled, "Replacements" for details on how to replace a part.

Z Extended Warranty



Z Microsystems' Extended Warranty Plan provides one and two year extended warranty options under which a Standard Warranty is extended from the end of the first year of the Standard Warranty period.

The One-Year Extended Warranty period will begin on the day the Standard Warranty expires and the Two-Year Extended Warranty begins when the One-Year Extended Warranty expires.

1-90 days - Z AirSpare Service

91-365 days - Free Parts and Labor

- 9-5 EST telephone technical assistance
- Online technical help
- Email product updates

2nd year - Free Parts and Labor

- 9-5 EST telephone technical assistance
- Online technical help
- Email product updates

3rd year - Free Parts and Labor

- 9-5 EST telephone technical assistance
- Online technical help
- Email product updates

Z Preferred Warranty



Z Microsystems provides a Preferred Service Plan under which Z Microsystems will repair or replace and return a defective product to the customer within one week of Z Microsystems' receipt of the defective product.

1-90 days - Z AirSpare Service

91-365 days - Free Parts and Labor

- 9-5 EST telephone technical assistance
- Online technical help
- Email product updates
- Guaranteed One Week Turnaround

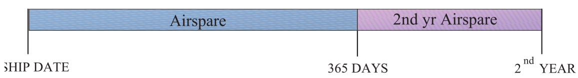
2nd year - Free Parts and Labor

- 9-5 EST telephone technical assistance
- Online technical help
- Email product updates
- Guaranteed One Week Turnaround

3rd year - Free Parts and Labor

- 9-5 EST telephone technical assistance
- Online technical help
- Email product updates
- Guaranteed One Week Turnaround

Z Airspare Warranty



Z Microsystems provides an AirSpare Service Plan that will replace a defective product, within the first year of the warranty period, with a new product the following business day.* The AirSpare Service Plan does not cover special order items. A product may be deemed a special order item at the discretion of the Customer Service Department. Z Microsystems, at its discretion, may offer the AirSpare Service Plan to a customer who purchases a special order item at the one-year rate.

*Z Microsystems cannot guarantee next day delivery if contacted after 2:00 PM Pacific Time. Calls on Fridays or before holidays will receive a new product the following business day.

1st Year - 24 hour replacement

- 9-5 EST telephone technical assistance
- Online technical help
- Email product updates

2nd Year - 24 hour replacement

- 9-5 EST telephone technical assistance
- Online technical help
- email product updates

Z On-Site Service

Z Microsystems also provides on site service and consultation to customers who require Z Microsystems' technical expertise.

Disclaimer

Z Microsystems warrants that every product is free from defects in materials, workmanship and conforms to Z Microsystems' stringent specifications.

Z Microsystems calculates the expiration of the warranty period from the date the product is shipped. This means that the ship date on your invoice is your product ship date unless Z Microsystems informs you otherwise. During the warranty period, Z Microsystems will provide warranty service under the type of warranty purchased for the product.

Replacement parts will assume the remaining warranty of the parts they replace. If a product does not function as warranted during the warranty period, Z Microsystems will repair or replace the part (with a product that is as a minimum functionally equivalent) without charge.

If the product is transferred to another user, the warranty service is available to that user for the remainder of the warranty period.

Z Microsystems' warranties are voided if the covered product is damaged due to an accident or abuse. The warranty is voided if the product is shipped in sufficient packaging.

Under no circumstances is Z Microsystems liable for any of the following:

1. Third-party claims against you for losses or damages,
2. Loss of, or damage to, your records or data, or
3. Economic consequential damages (including lost profits or savings) or incidental damages, even if Z Microsystems is informed of their possibility.

Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights that vary from jurisdiction to jurisdiction.

Warranty does not take effect until full payment is received by Z Microsystems.

CUSTOMER SUPPORT

NOTE: For image problems, run AUTO SETUP again before consulting this section. In most cases, AUTO SETUP can fix the problems. See the Auto Setup section for details.

NOTE: If possible, stay by the computer. The Z Microsystems Technical Support Representative may wish to go through the problem over the telephone.

NOTE: More help, late-breaking news and details of the latest accessories for these products may be found on the worldwide web at:

http://www.zmicro.com

If you are unable to correct the problem yourself, contact:

Z Microsystems at:

(858) 657-1000
Fax: (858) 657-1001
Website: www.zmicro.com

Before calling, please have available as much of the following information as possible:

1. Model and serial number from the label on the monitor
2. Purchase P.O.
3. Description of problem
4. Computer type and model
5. System configuration (hardware fitted, etc.)
6. System BIOS version number
7. Operating System and version number
8. Display driver version number
9. Video Adapter Type

CUSTOMER FEEDBACK

We value feedback on our products, their performance, problems found, and welcome all constructive suggestions. Please send such productive information in writing to:

Customer Service
Z Microsystems
5945 Pacific Center Blvd., Suite 505
San Diego, CA 92121

or www.zmicro.com

Z Microsystems, Inc.
5945 Pacific Center Blvd., Suite 505
San Diego, CA 92121
Phone: (858) 657-1000
Fax: (858) 657-1001
Website: www.zmicro.com